IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Bjornerud *et al.*
Application No.	:	10/018,026
Filing Date	:	June 11, 2002
Art Unit	:	3736
Title	:	Method of Magnetic Resonance Imaging
Examiner	:	Ruth S. Smith
Docket No.	:	NIDN-10403

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PO Box 1450
Alexandria VA 22313-1450

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The party in interest in this Appeal is GE Healthcare, Inc., a part of General Electric ("GE").

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences related to the instant appeal.

III. STATUS OF CLAIMS

Claims 24-29, 32 and 33 are pending in the present application. The Examiner has rejected all of these claims. Claims 24-29, 32 and 33 as amended during prosecution are reproduced in the **Claims Appendix** attached hereto. Appellants are appealing the rejection of Claims 242-29, 32 and 33.

IV. STATUS OF AMENDMENTS

A final Office Action was mailed on February17, 2010. No claims have been amended thereafter.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 24 describes a method of magnetic resonance imaging of a kidney in vascularized human or non human body comprising the steps of:

administering into the vasculature of said body a bolus of a blood pool MR contrast agent;

generating a contrast enhanced MR image of said kidney during the first pass of said contrast agent;

generating at least one further MR image of said kidney after the concentration of said contrast agent throughout the blood of said body has become substantially uniform-thereby allowing both visualisation and gradation of renal artery stenosis and quantification of renal perfusion.

Support for this claim can be found on pages 4-6 of the specification.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues for review in this appeal arise from an Office Action dated April 17, 2010.

Claim 24 stands rejected under 35 USC § 102(e) as being anticipated over Mistretta (6,381,486).

Claims 24 and 32-33 stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta et al. (Mistretta") in view of Stark et al ("Magnetic Resonance Imaging") and further in view of Schurfeld et al. ("Renovascular hypertension)" or Lerman et al.

Claims 25-27 are rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman in view of Berg.

Claim 28 is rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman and in further view of Fischer.

Claim 29 is rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman and in further view of McMurray.

Therefore, the issues in this appeal are:

Whether claim 24 is anticipated by Mistretta?

Whether Mistretta in view of Stark alone or in further view of Schurfeld or or Lerman disclose, teach, or suggest all the elements of claims 24-29, 32 and 33?

VII. ARGUMENT

Appellants respectfully request that the Board should reverse the Examiner's rejection for the reasons set forth below.

Claim 24 stands rejected under 35 USC § 102(e) as being anticipated over Mistretta (6,381,486).

Claims 24 and 32-33 stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta et al. (Mistretta") in view of Stark et al ("Magnetic Resonance Imaging") and further in view of Schurfeld et al. ("Renovascular hypertension") or Lerman et al.

Claims 25-27 are rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman in view of Berg.

Claim 28 is rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman and in further view of Fischer.

Claim 29 is rejected under stand rejected under 35 USC § 103(a) as being unpatentable over Mistretta in view of Stark alone or further in view of Schurfeld or Lerman and in further view of McMurray.

Appellants respectfully sumit that one skilled in the art can not use Mistretta to anticipate current claim 24 since Mistretta does not teach, disclose, or even suggest all the elements of claim 24. Appellants accordingly submit that the anticipation rejection of claim 24 be dismissed. Appellants note that the prior art itself must provide a motivation or reason for the worker in the art, without the benefit of the Applicant's specification, to make necessary changes in the reference device. See, *Ex parte Chicago Rawhide Manufacturing Co.*, 226 U.S.P.Q. 438 (PTO Bd. App. 1984).

Appellants further respectfully point out it is well-settled law that "when a claimed invention is not identically disclosed in a reference, and instead, requires picking and choosing among a number of different options disclosed by the reference, then the reference does not

anticipate. *Mendenhall v. Astec Industries, Inc.*, 13 U.S.P.Q.2d 1956 (Fed. Cir. 1989). (emphasis added).

Further, the Examiner holds that the MR data obtained by Stark which is indicative of renal stenosis grade is inherently also indicative of renal perfusion. None of the prior art references disclose, teach, or suggest quantification of both perfusion and stenosis grade in a single examination. Inherently as used by the Examiner here is based on the Examiner's own subjective interpretation.

It is important to note too that "[a] basic mandate inherent in 35 U.S.C. §103 is that "a piecemeal reconstruction of prior art patents in light of the applicants' disclosure" shall not be the basis for a holding of obviousness." *In re Kamm and Young*, 452 F.2d 1052. (C.C.P.A. 1972).

Appellants respectfully point out that renoparenchymal and renovascular diseases can co-exist and it is important to determine the extent to which a renal artery stenosisis is contributing to the overall malfunctioning of the kidney, i.e. to determine the hemodynamic and functional significance of the stenosis. The present invention describes a method of how to quantify both the morphological degree of renal artery stenosis and the renal parenchymal perfusion in a single MR examination if a blood pool contrast agent is used, i.e. a contrast agent that remains in the intravascular space during the time course of the examination.

Additionally, in claim 24 Appellants clearly point out that quantified data for both renal perfusion and renal stenosis grade are provided in one single examination.

. Additionally, since claims 25-27 only introduce further limitations to the present invention, claims 25-27 will stand or fall based on independent claim 24.

And since claim 28 only introduces further limitations to the present invention, claim 28 will stand or fall based on independent claim 24. As well, claim 29 only introduces further limitations to the present invention, claim 28 will stand or fall based on independent claim 24.

Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection and direct that claims 24-29, 32 and 33 be allowed.

Conclusion

In view of the foregoing, Appellants respectfully request that the Board reverse the rejections of Claims 24-29, 32 and 33 as set forth in the Office Action mailed April17, 2010, that the Board allow the pending claims since they are in condition for allowance, and that the Board grant any other relief as it deems proper.

Dated: October 18, 2010

Respectfully submitted,

/Craig M. Bohlken/
Craig M. Bohlken
Reg.No.52,628
GE Healthcare, Inc.
101CarnegieCenter
Princeton, NJ 08540-6231
Phone No.: (609) 514-6530

VIII. CLAIMS APPENDIX

1. – 23. (Cancelled)

24. A method of magnetic resonance imaging of a kidney in vascularized human or non human body comprising the steps of:

administering into the vasculature of said body a bolus of a blood pool MR contrast agent;

generating a contrast enhanced MR image of said kidney during the first pass of said contrast agent;

generating at least one further MR image of said kidney after the concentration of said contrast agent throughout the blood of said body has become substantially uniform-thereby allowing both visualisation and gradation of renal artery stenosis and quantification of renal perfusion.

25. The method of claim 24, wherein said blood pool MR contrast agent is a superparamagnetic contrast agent.

26. The method of claim 24, wherein the method of said blood pool MR contrast agent further comprises magnetic iron oxide particles having on their surfaces an optionally modified polysaccharide and optionally a material which inhibits opsonization.

27. The method of claim 24, wherein the method of said blood pool MR contrast agent further comprises superparamagnetic iron oxide particles having on their surfaces degraded starch.

28. The method of claim 24, wherein said contrast enhanced MR image of said kidney generated during the first pass of said contrast agent is a T_2*-weighted image.

29. The method of claim 24, wherein said at least one further MR image of said kidney generated after the concentration of said contrast agent throughout the blood of said body has become substantially uniform is a T_1-weighted image.

30- 31. (Cancelled)

32. The method of claim 24, wherein said contrast enhanced MR image of said kidney generated during the first pass of said contrast agent is used to quantify intra-parenchymal blood volume.

33. The method of claim 32, wherein said method is used to assess parenchymal damage.

VIII. EVIDENCE APPENDIX

Appellants hereby present the following patents/article that per cited by the Examiner throughout prosecution of this case:

Mistretta (6,381,486);

Stark "Magnetic Resonance Imaging";

Schurfeld "Renovascular hypertension"

Lerman et al;

Berg et al;

Fischer; and

McMurray.

This is the evidence relied upon by the Examiner for rejection of appealed Claims 24-29, 32 and 33 in the final Office Action dated April 17, 2010.

IX. RELATED PROCEEDINGS APPENDIX

There are no other appeals or interferences related to the instant appeal.